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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/521,827 | 01/21/2005 | Robert J. Fleming | 58046US012 | 2068 |
| 32692 | 7590 | 10/20/2006 | EXAMINER | |
| 3M INNOVATIVE PROPERTIES COMPANY PO BOX 33427 ST. PAUL, MN 55133-3427 | | | LAVILLA, MICHAEL E | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 1775 | |

DATE MAILED: 10/20/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/521,827

Applicant(s)

FLEMING ET AL.

Examiner

Michael La Villa

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 July 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-31 is/are pending in the application.
- 4a) Of the above claim(s) 17-31 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 January 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:
2. The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
3. Claims 1-16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
4. Regarding Claims 1-16, it is unclear whether the list of specific definitions of terms, provided in the Specification at paragraphs 23-32, defines claim terminology, or do these definitions not limit the claim terminology?
5. Regarding Claim 1, it is unclear whether the described structure involving a support, a metal layer, and a protective layer necessarily requires that the “extensible metal or metal alloy layer” is sandwiched by the support and protective layer or whether the three layers may be arranged having any one layer between the other two.
6. Regarding Claim 5, it is unclear whether the second (or more) layer must be “extensible metal or metal alloy layer.”
7. Regarding Claim 7, line 3, it is unclear what is meant by the phrase “one or more adjacent layers within the film.” Are these layers necessarily adjacent to the “metal or metal alloy layer”? Applicant’s response suggests this interpretation, but the plain language appears to not require this interpretation.

8. Regarding Claims 1-16, it is unclear how to reconcile the requirements of a “permanently deformed curved region” and an “extensible metal or metal alloy layer.” It is unclear whether and how such a permanently deformed curved region can be ascertained to have an extensible metal or metal alloy layer. Does the claim require that the “permanently deformed curved region” have been formed from a laminate having an “extensible metal or metal alloy layer”? Does it mean something else?

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148

USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

11. Claims 1-3 and 7-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chapman et al. USPN 4,965,408 for the reasons of record in the Office

Action mailed on 28 February 2006.

Response to Amendment

12. In view of applicant's amendments and arguments, applicant traverses the section 112, second paragraph rejections of the Office Action mailed on 28 February 2006. Applicant explains that definitions at paragraphs 23-32 define terms that appear in the claims. It remains unclear whether applicant considers the respective terms that appear in the claims to be necessarily limited by these definitions. Applicant explains that laminates having the claimed layers provided in the listed order are demonstrated in embodiments. However, it remains unclear whether applicant considers the claim to be limited to laminates having the claimed layers provided in the listed order. Applicant explains that "two or more metal or metal alloy layers" refers to the claimed extensible layer as well as another metal or metal alloy layer. It remains unclear whether the additional layer need be extensible too. If not, it is unclear why it is described in terms comparable to the extensible one. Those rejections not repeated above are withdrawn.

13. In view of applicant's amendments and arguments, applicant traverses the section 103 rejection over Chapman of the Office Action mailed on 28 February 2006. Applicant argues that Chapman does not teach metal layers formed by deposition, but rather metal foils. While this distinction may be correct, it is unclear what structural or compositional feature is necessarily present in the claimed article that is necessarily absent in the article formed with the metal foil of Chapman. Applicant argues that Chapman does not teach cross-linked

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polymer. At col. 3, lines 20-39, Chapman's definition of "copolymer" refers to "two or more polymeric materials" that can be, among other things, "reacted together" or "otherwise combined." Reacting two polymeric materials together or otherwise combining them is quintessential cross-linking. Applicant's claim does not preclude end-group combinations and does not require that combinations occur in a single polymer strand or between strands of a single polymer type. Rejection is maintained.

Allowable Subject Matter

14. Claims 4-6, 15, and 16 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Conclusion

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael La Villa whose telephone number is (571) 272-1539. The examiner can normally be reached on Monday through Friday.
16. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jennifer McNeil can be reached on (571) 272-1540. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

17. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Michael La Villa
14 October 2006



MICHAEL E. LAVILLA PH.D.
PRIMARY EXAMINER